# Addressing Social Determinants of Health:

## The Key to Overcoming Growing HIV Disparities

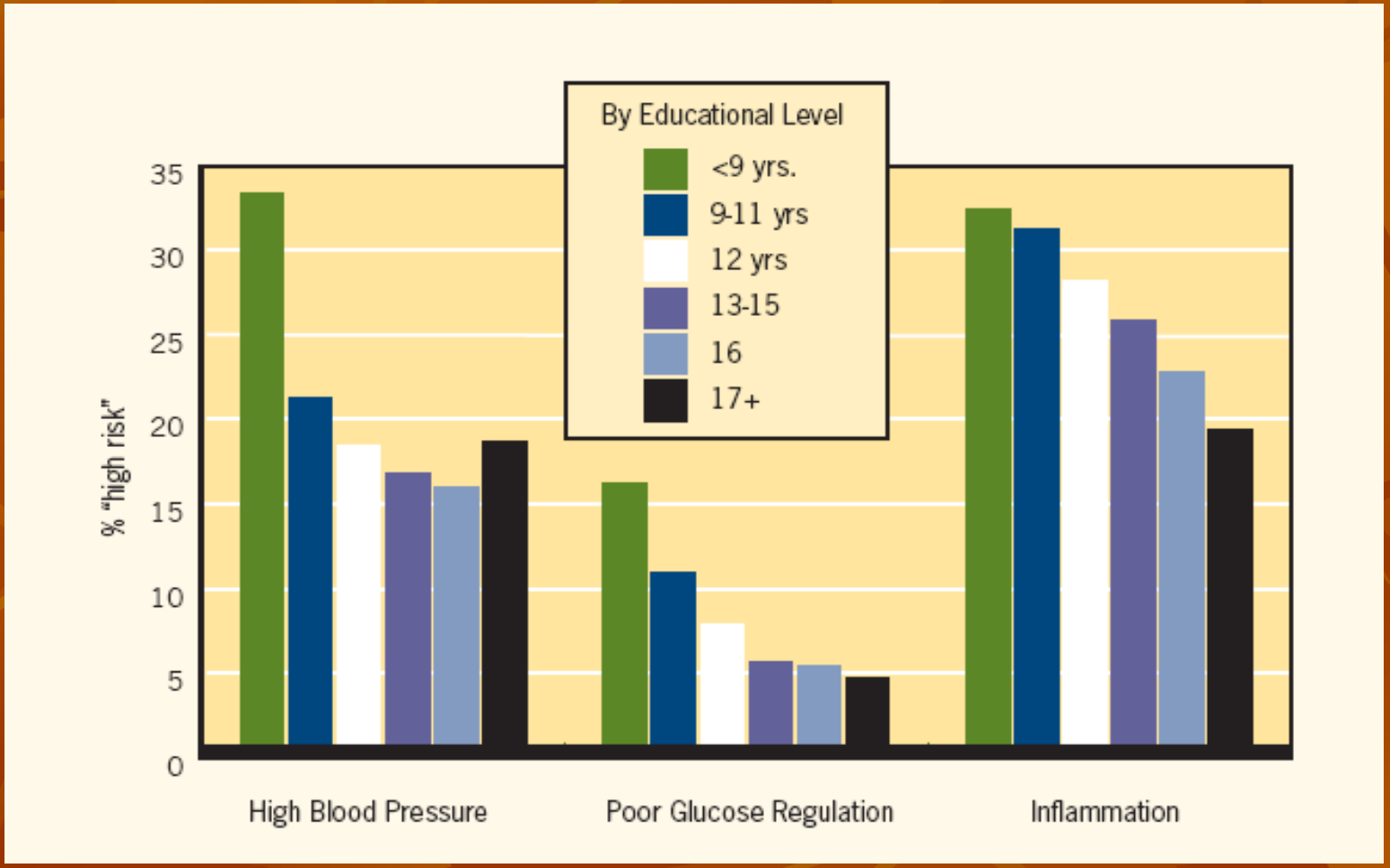
## 2014 Texas HIV-STD Conference

Heidi Behforouz; AnansiHealth 2014

# Definitions

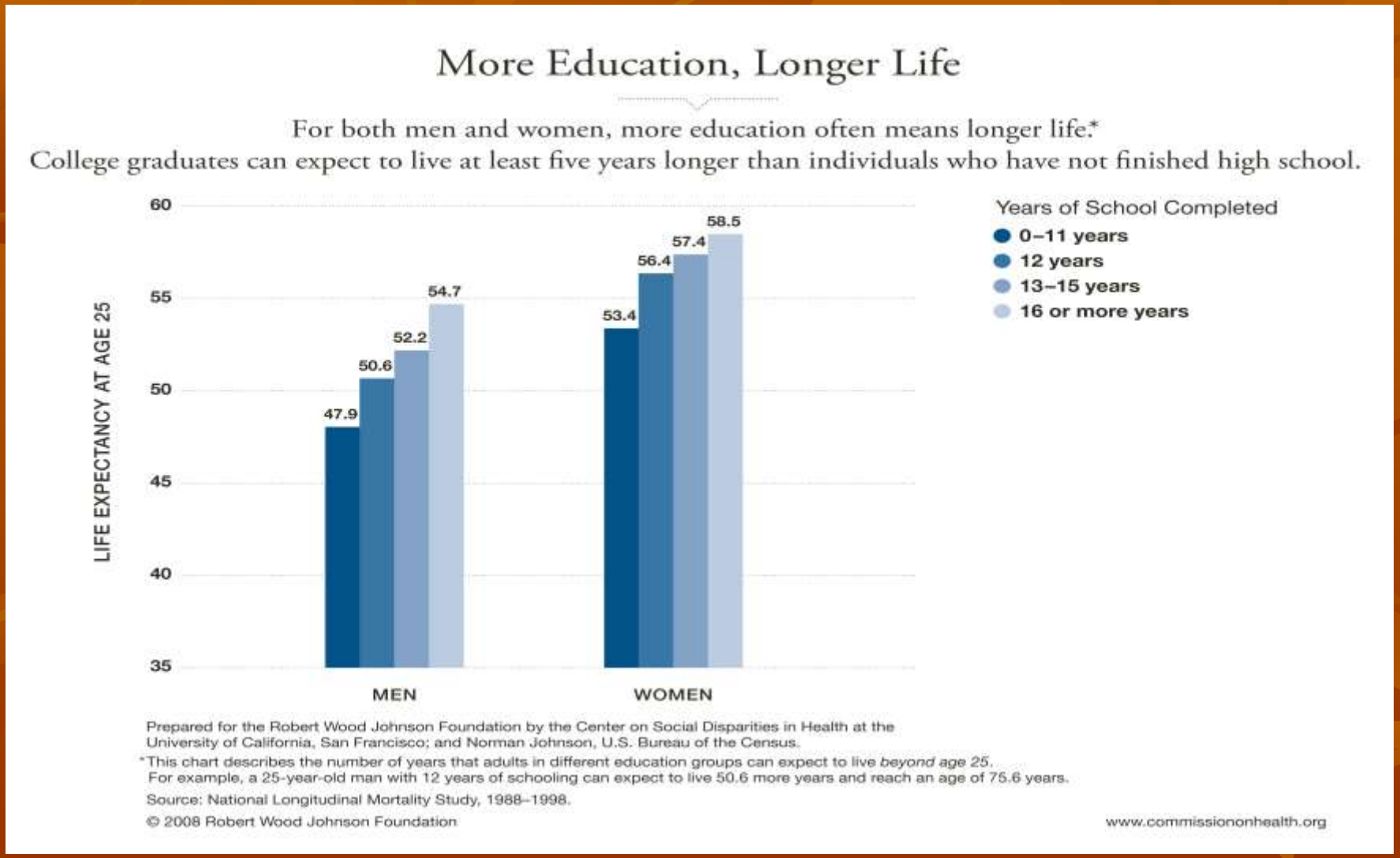
**Social determinants of health** are“the circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness.”(WHO Commission on the Social Determinants of Health, 2008)

# Social Determinant: Education

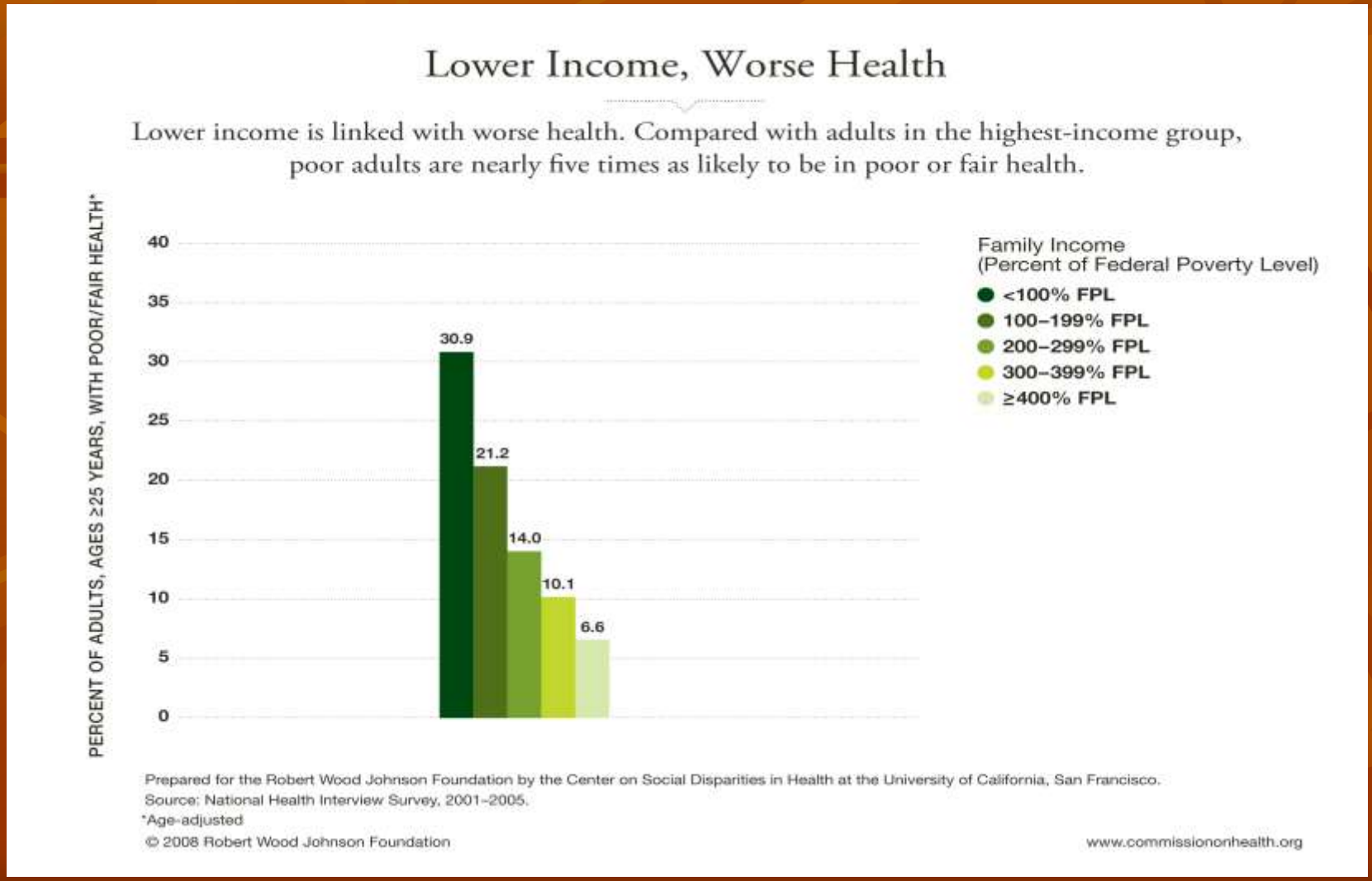



**Source: National Health interview Survey,2001-05 Robert Wood Johnson Foundation, 2008**

# Education and Mortality



# Health and Wealth



# Overview of Presentation

- How do social determinants of health play out in our fight against growing HIV disparities?
- My personal journey with community-based HIV prevention/treatment interventions
- Individual vs structural interventions AND upstream vs downstream interventions
- A call to action

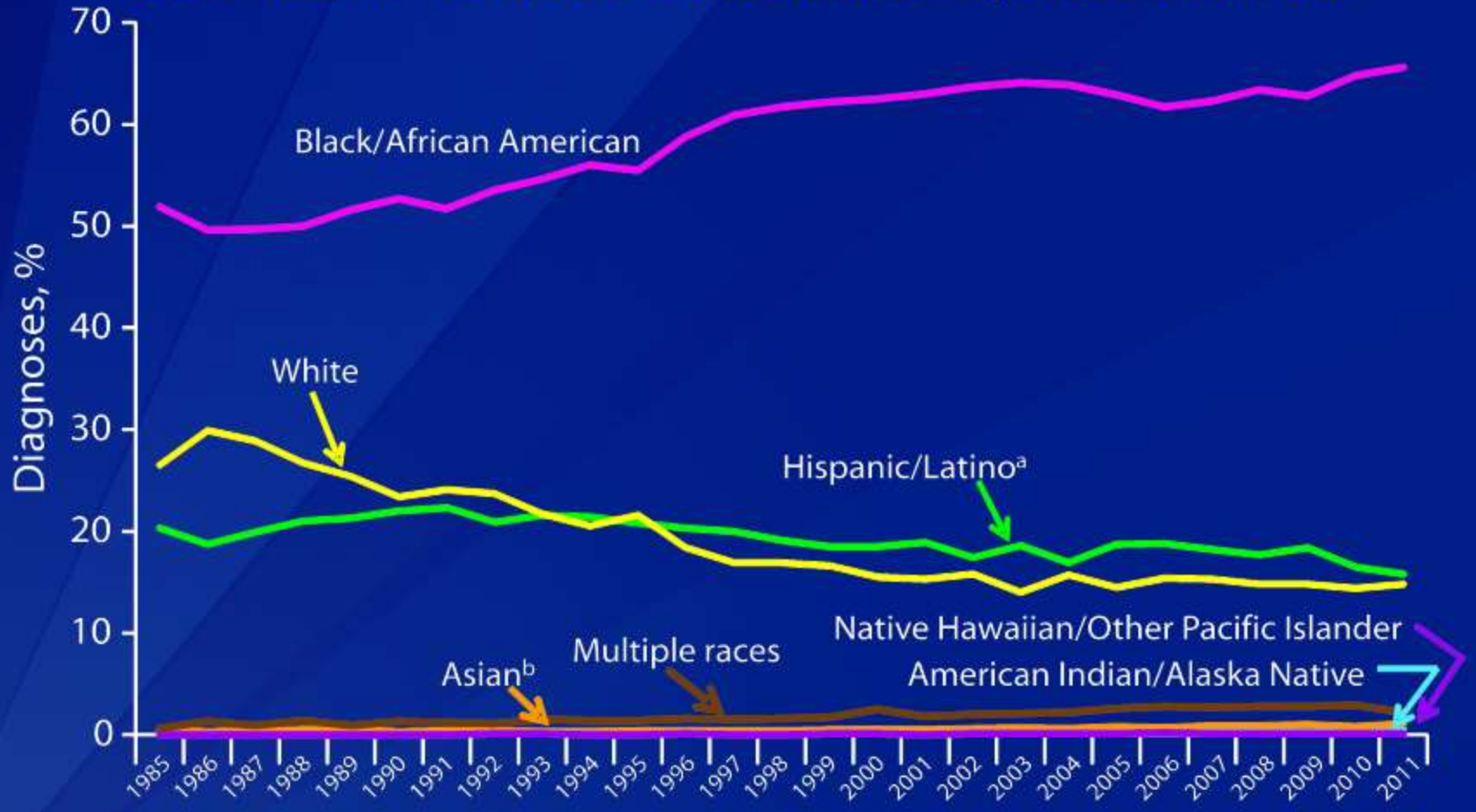
# Mary

- 37 y/o African American woman
- Family moved from Virginia to Boston four generations ago: “housekeepers” in the Longwood Medical Area
- Lives in Mattapan
- 6th grade education and unemployed
- Crack user; two children in foster care
- A string of bad relationships; currently with a partner of 5 years. He is abusive but supports the family
- Two children; one of whom is 15 y/o and pregnant
- Intermittently homeless
- HIV-positive x 10 years; her partner does not know

# Mary

- Referred by her doctor as “dying”
- CD4 count = 4 cells/µl
- HIV viral load >750,000 despite years of prescriptions for ART
- ART variably prescribed given drug use
- Weight = 84 lb
- Disseminated thrush, herpes, cervical cancer
- “Depression and denial”
- Poorly adherent to medications and appointments

# Percentages of Stage 3 (AIDS) Classifications among Adult and Adolescent Females, by Race/Ethnicity and Year of Diagnosis 1985–2011—United States and 6 Dependent Areas



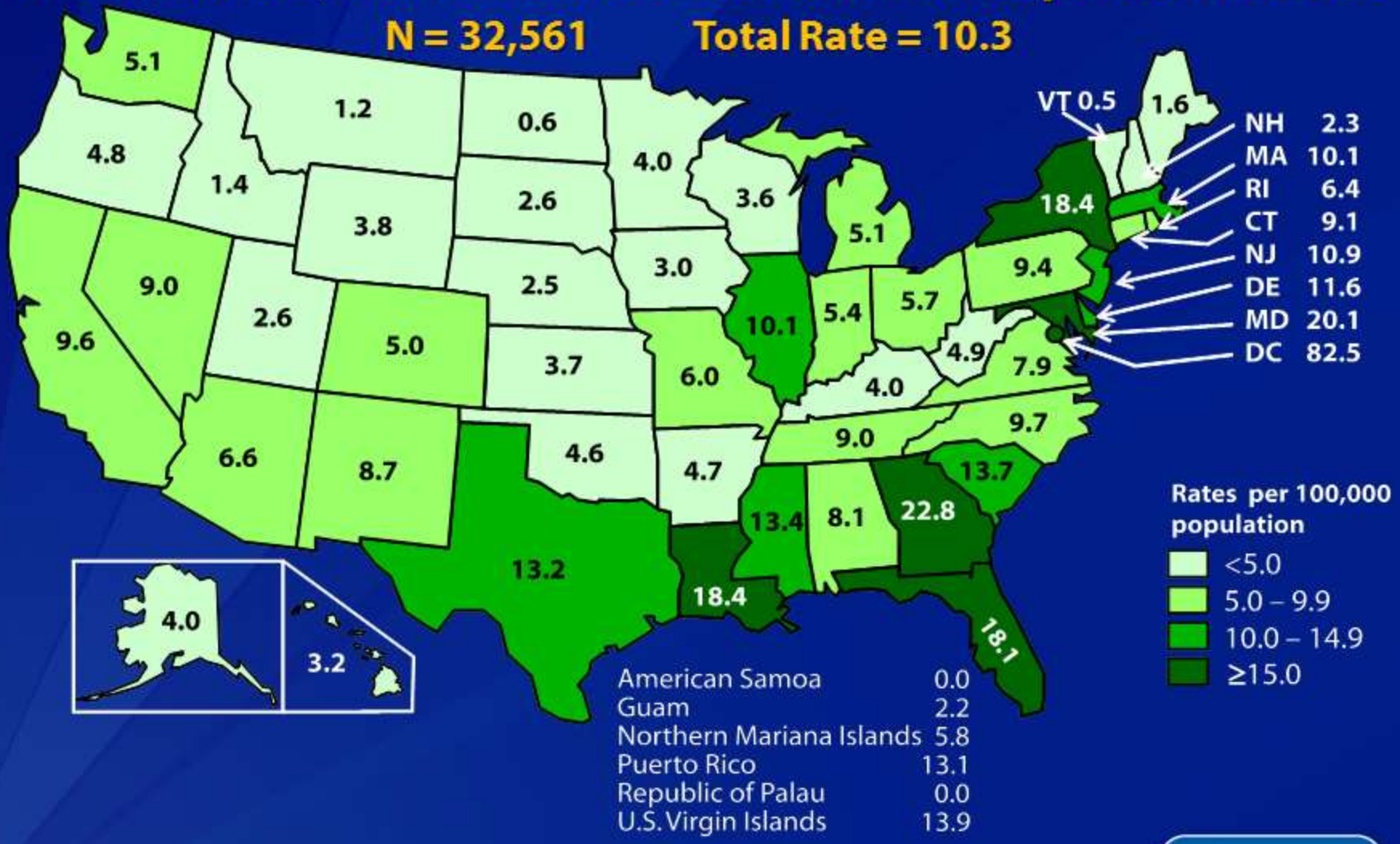

*Note.* All displayed data have been statistically adjusted to account for reporting delays, but not for incomplete reporting.

[a] Hispanics/Latinos can be of any race.

[b] Includes Asian/Pacific Islander legacy cases.

CDC

# Rates of Stage 3 (AIDS) Classifications among Persons with HIV Infection, 2011—United States and 6 Dependent Areas

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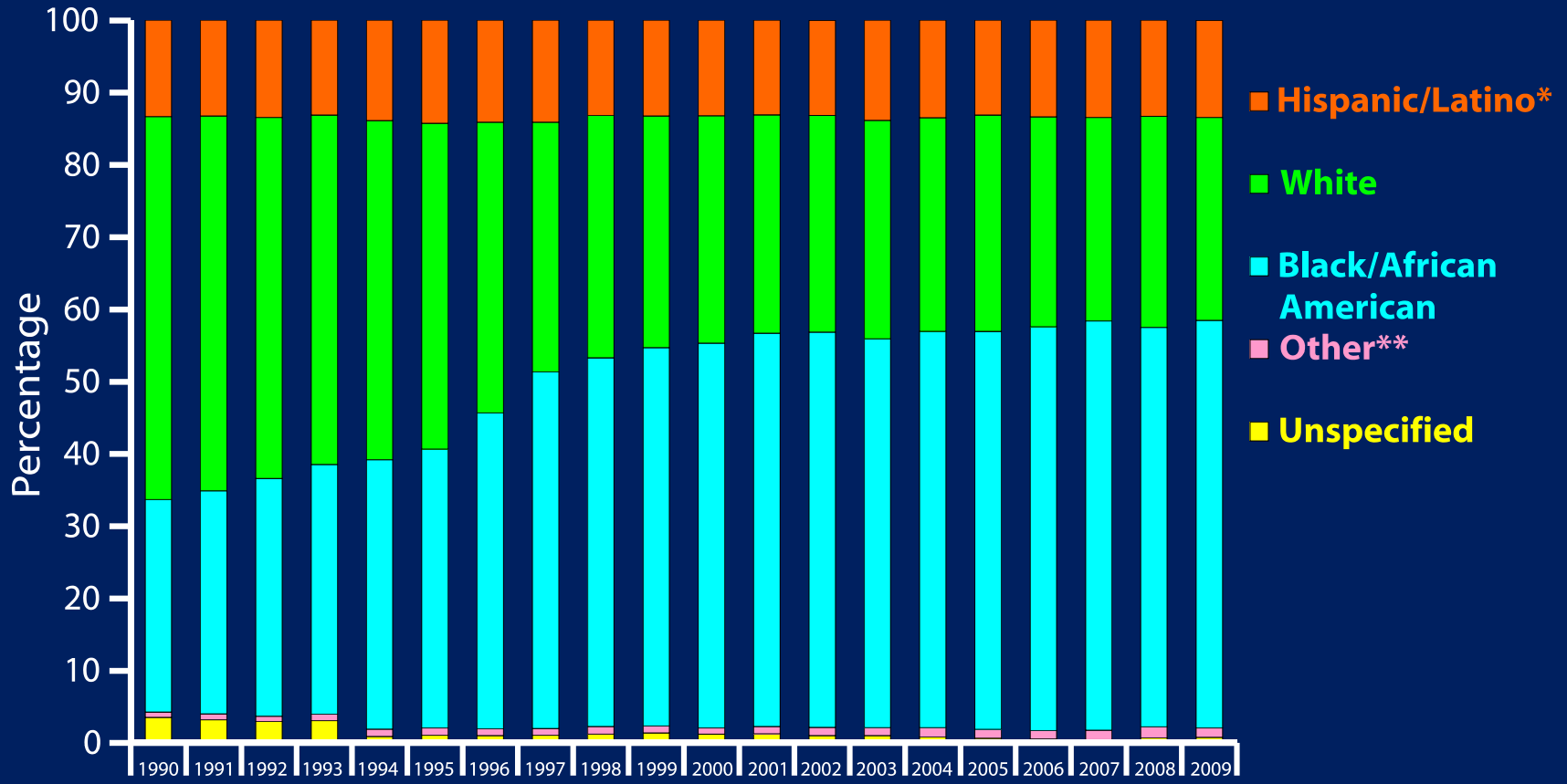
# Trends in the Percentage Distribution of Deaths due to HIV Infection by Race/Ethnicity, United States, 1990–2009



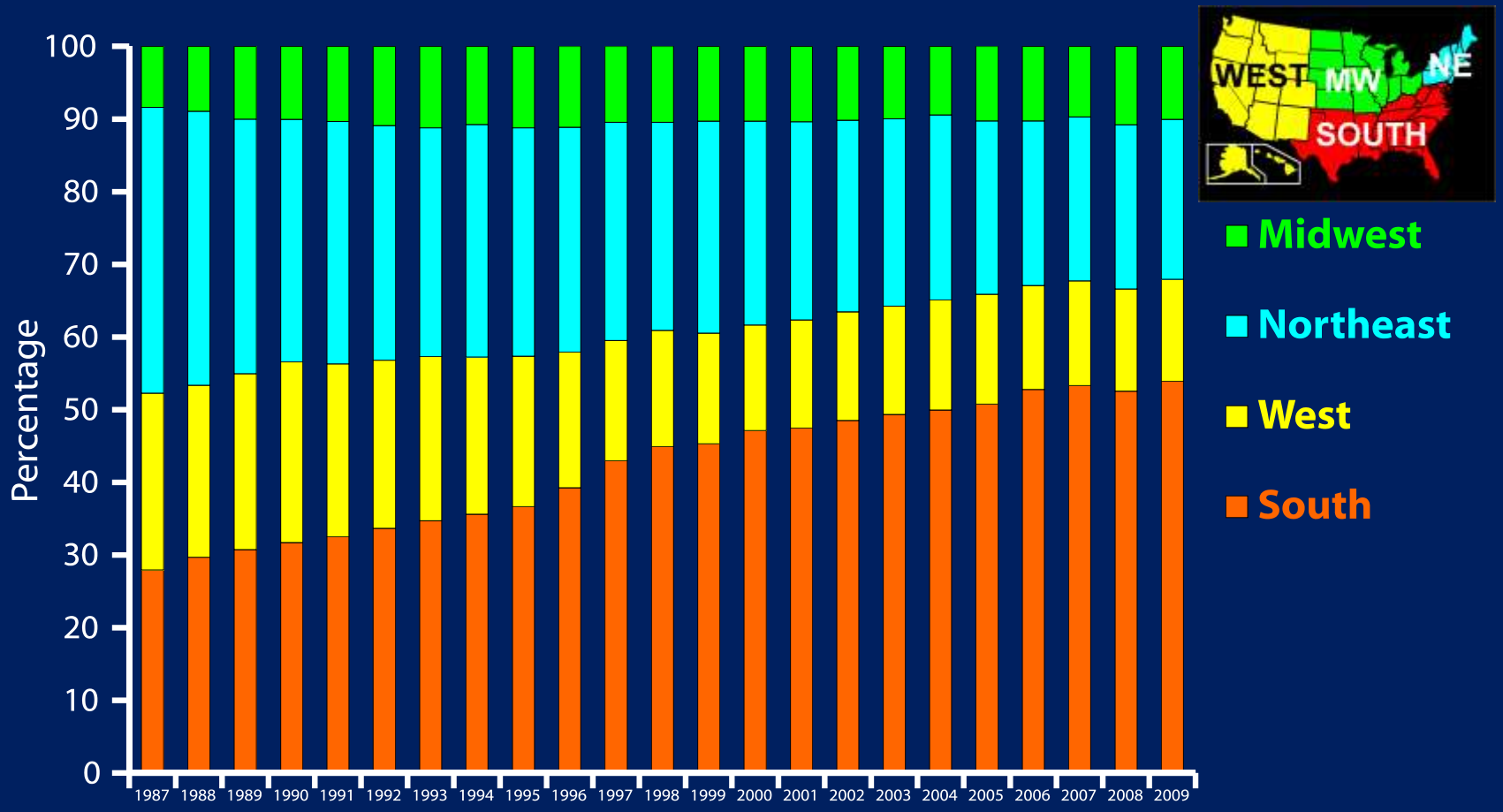

Note: For comparison with data for 1999 and later years, data for 1990–1998 were modified to account for *ICD-10* rules instead of *ICD-9* rules.

*Hispanics/Latinos can be of any race

**Asian/Pacific Islander, American Indian/Alaska Native

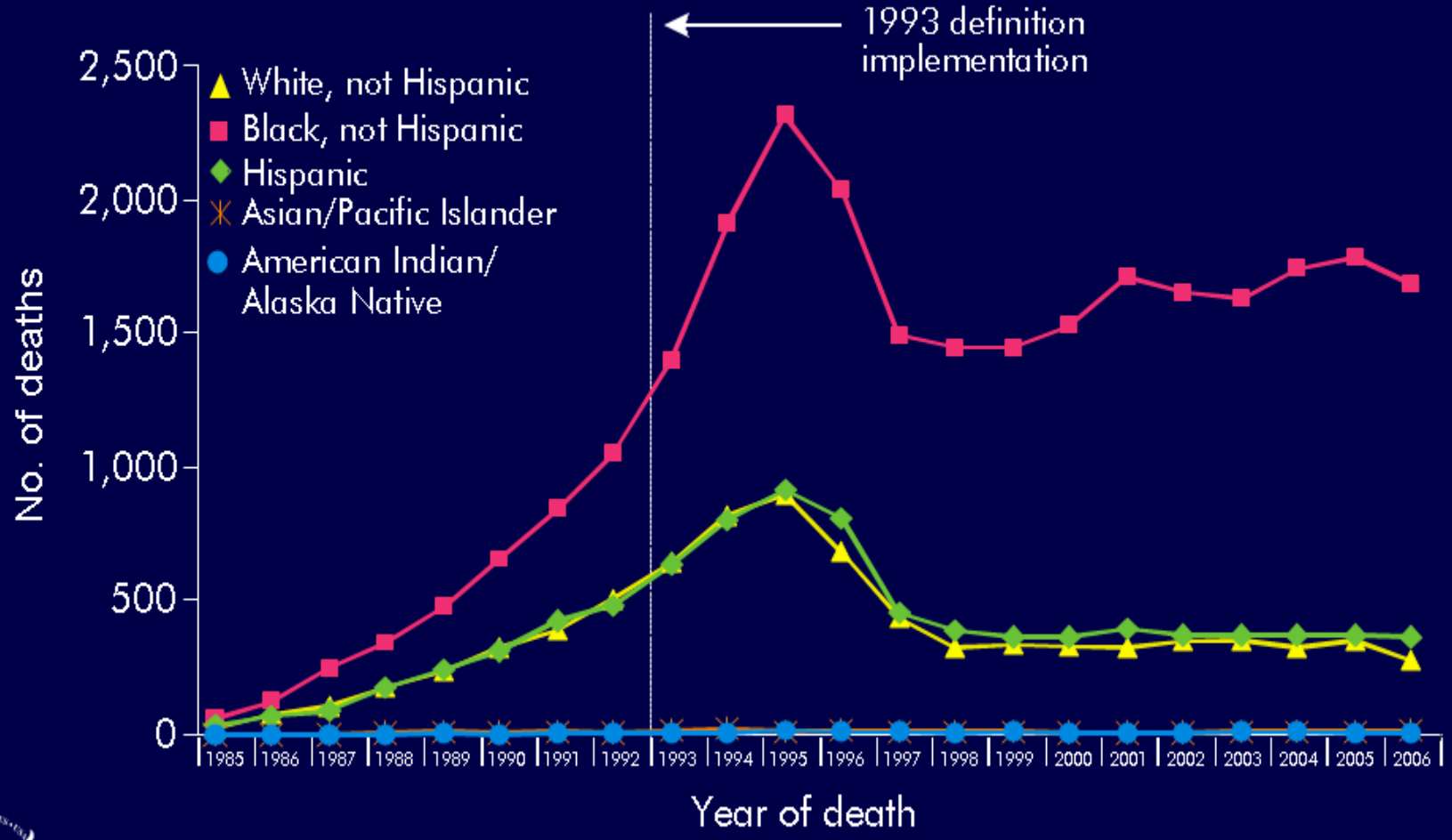
The racial/ethnic categories other than Hispanic/Latino are all non-Hispanic/non-Latino

# Trends in the Percentage Distribution of Deaths due to HIV Infection by Geographic Region, United States, 1987–2009




Note: For comparison with data for 1999 and later years, data for 1987–1998 were modified to account for *ICD-10* rules instead of *ICD-9* rules.

# Estimated Number of Deaths among Female Adults and Adolescents with AIDS Attributed to High-Risk Heterosexual Contact*, by Race/Ethnicity, 1985–2006—United States and Dependent Areas




Note. Data have been adjusted for reporting delays and cases without risk factor information were proportionally redistributed.

* Heterosexual contact with a person known to have or to be at high risk for HIV infection.

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# Why the disparities in outcome?

- Not biological as far as we know
- Poverty/marginalization forces priorities other than health and logistically/psychosocially complicates interaction with the system
- Poor access to care (e.g. insurance)
- Poor utilization of care
- Stigma, fatalism, depression, substance use, violence, PTSD, stress, distrust of the system
- Education; health literacy; language barriers
- System problems (health care/social service systems are not designed for the vulnerable)
- Differential treatment once in care: racism, sexism, classism

# Prevention and Access to Care and Treatment (PACT) Project

- Started in 1999 through Partners In Health
- Became a joint project of PIH & the DGHE at BWH
- Located in Dorchester
- Based on Haiti model of *accompagnateurs*
- Underlying premise that the vulnerable can be empowered to effect change at the level of the individual, community, health care system, and society
- Based on health promotion and harm reduction philosophies

# Why Community Health Workers?

- CHWs share the problems of clients: lived solidarity
- Same cultural/linguistic background
- Holistic/contextual approach
- Understand/address social dets of health
- Effect value-based care
- Build social cohesion and change social norms
- Promote meaningful workforce development opportunities in under-tapped communities

# Reverse Innovation

- CHWs were first used in global setting
- CHWs have been around in the US for a long time (since the 1960s)
- Not as optimally used here as abroad given professionalization/biomedicalization of health care
- Barriers to ready integration of CHWs are many

# WHAT CHWs DO…

- Accompaniment
- Home/community based interventions
- Motivational/activational work, skills building (beyond disease management)
- Modeling culturally competent and contextualized care for traditional providers
- Address upstream determinants of health
- Change norms around HIV and community capacity for self-healing

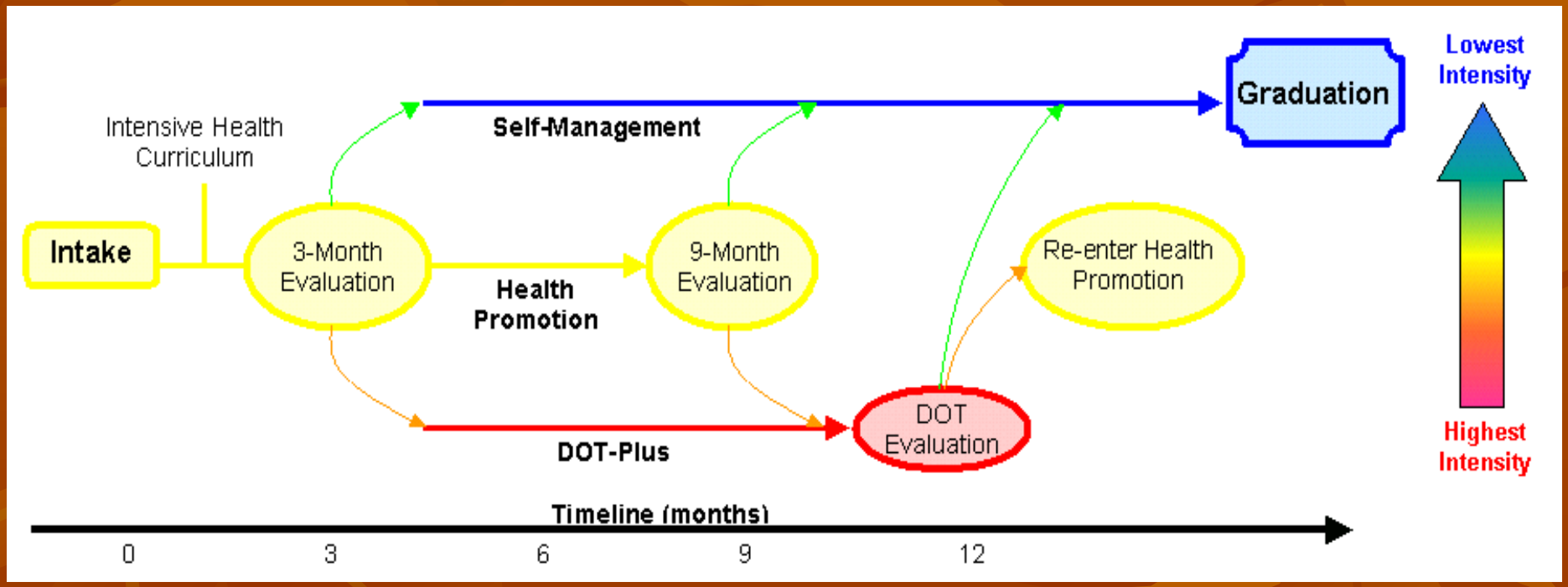
# Not your average HIV patient

- Average age=46
- 52% female
- 64% Black, 33% Latino, 1% White
- 99% have public insurance
- Median number of years since HIV dx=12
- Referred by provider given long hx of poor med adherence
- 77% heterosexual
- 73% unemployed >12 mos
- 41% high school graduate, 45% less than high school
- 64% clinically depressed
- 33% with active substance use
- 14% transiently housed
- Significant hx of trauma and abuse (over 70%)
- >70% with “social isolation”

# PACT Project

- Health Promotion Initiative
- **Low intensity**: Monitored self- administration with monthly health promotion
- **Moderate intensity:** Weekly health Promotion
- **High intensity**: DOT-Plus initiative

# Movement through PACT

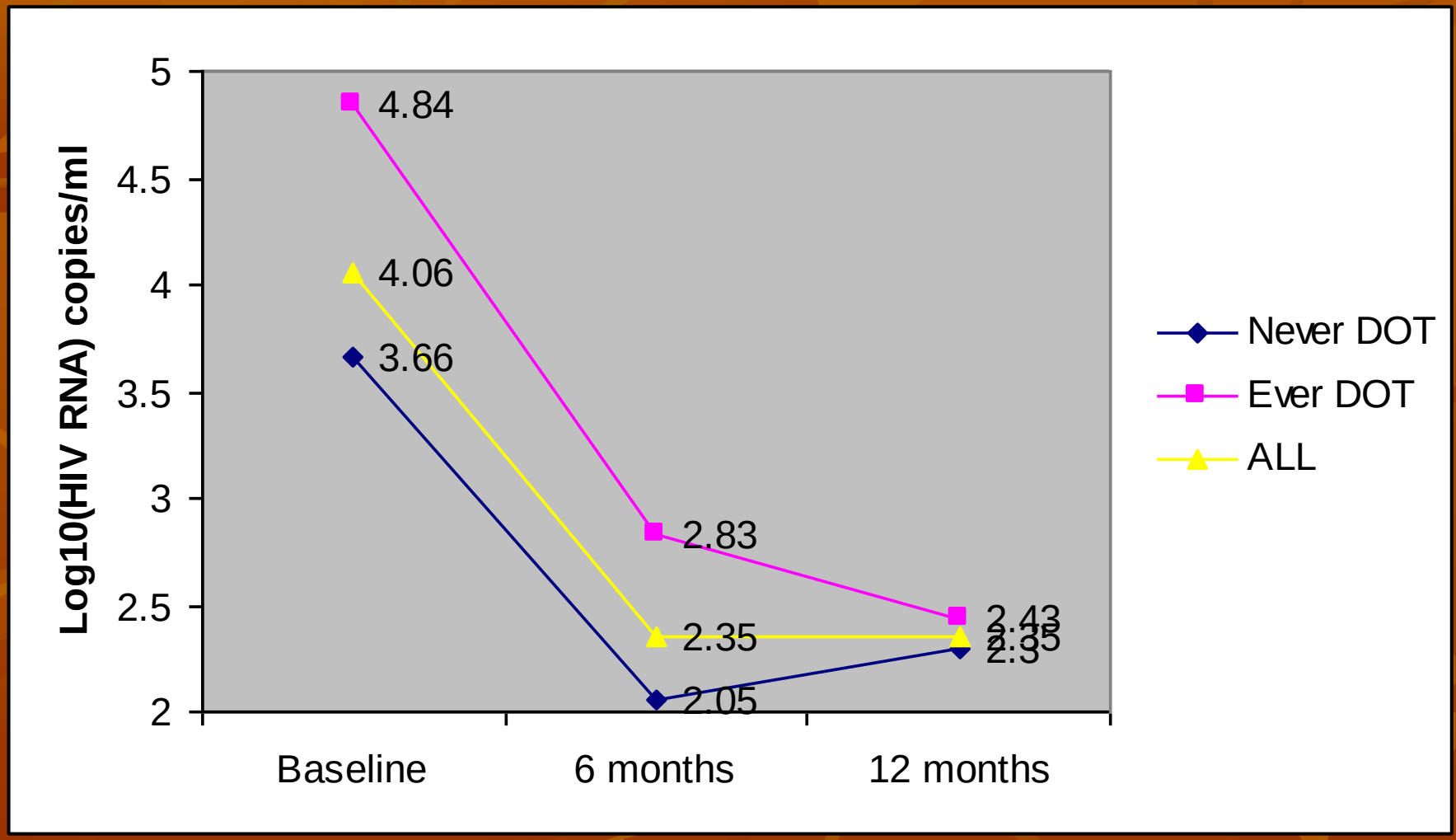


# Cristina at work…

# Outcomes of Interest for HP Program

- Improved clinical outcomes
- Improved quality of life
- Improved health care utilization patterns
- Cost-effectiveness
- Impact on CHWs; impact on community; impact on root causes; impact on health care system
- Sustainability
- Spread/replication or scale-up

# Mean $Log_{10}$(HIV Viral Load) Over 12 Months

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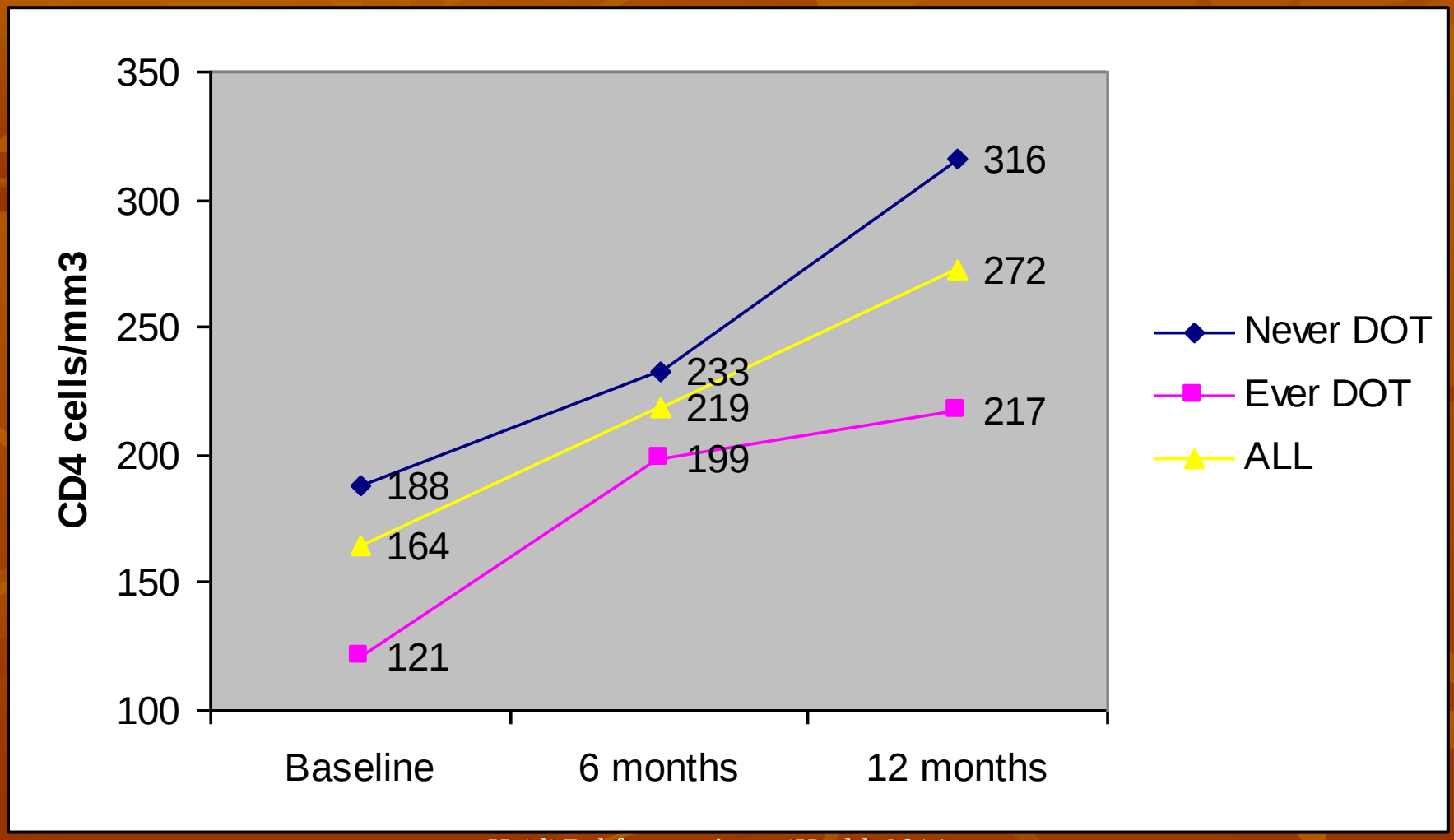
# Mean CD4 Over 12 Months

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# Hospital Utilization Study

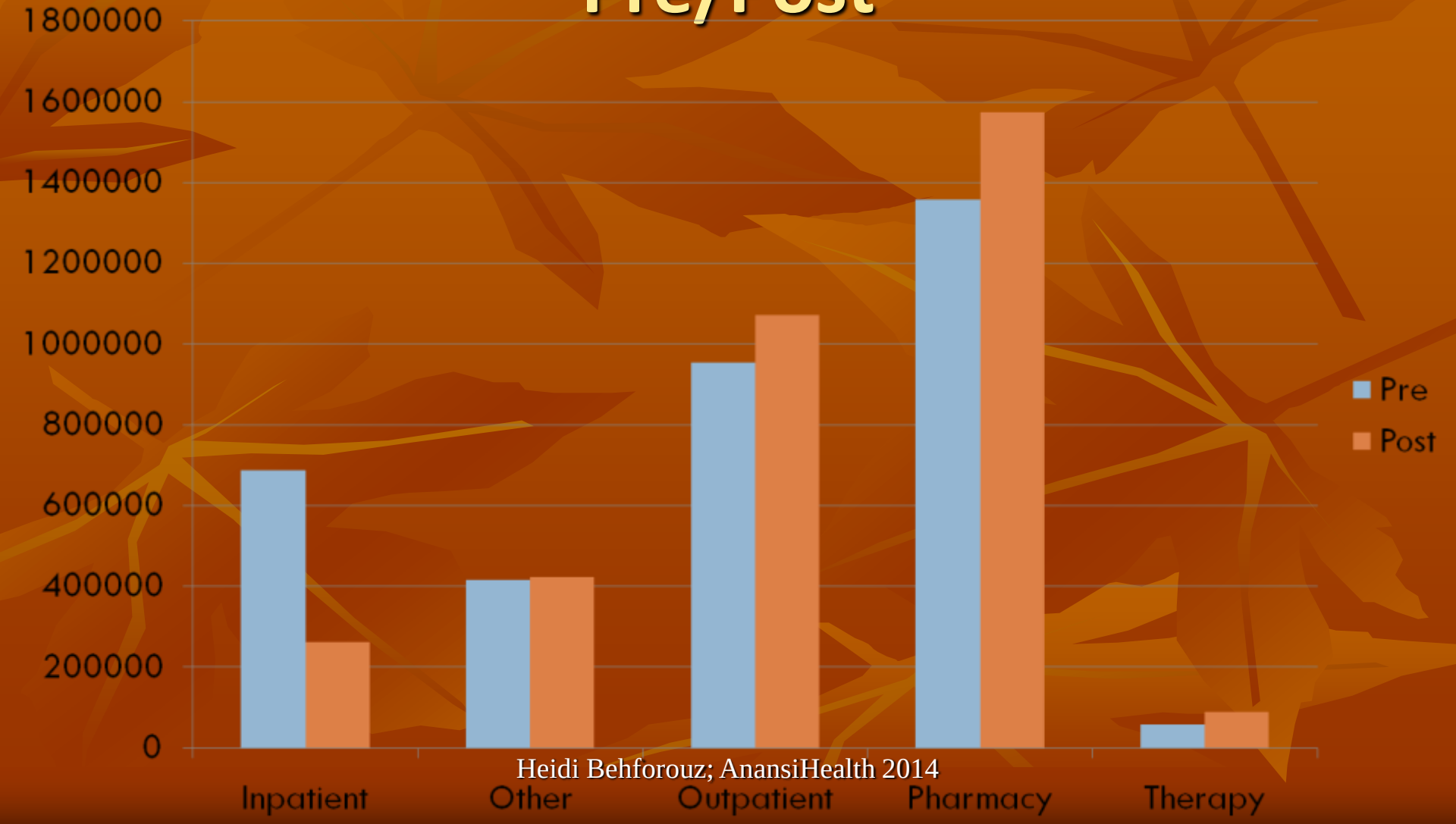
- Examined billing records for 40 patients exclusively receiving medical care from two hospitals (BWH & MGH)
- All patients had received PACT HP services for at least 1 yr

Comparing data 12 months pre and 12 months post enrollment:

- A 35% decrease in total inpatient days.
- A 50% decrease in median Length of Stay (LOS) per admission, from 10.0 to 5.0.
- A 50% decrease in total actual cost, from an avg.

  $22,443 cost per patient to $12,926.

# Utilization: Medicaid Expenditures 2 Years Pre/Post

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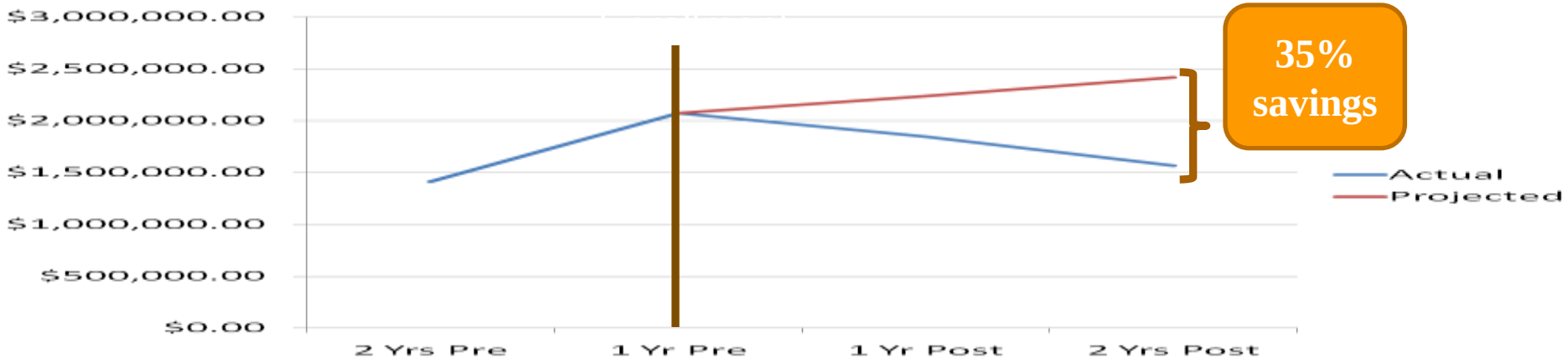
# Cost Savings for PACT Program

| Category | Value |
|---|---|
| Projected cost* at 2 yrs post enrollment | $2,417,455 |
| Actual cost at 2 yrs post enrollment | $1,564,550 |
| Difference | $852,905 |
| Program Cost for Cohort (n=68) | $472,567 |
| Net Savings | $380,338 |
| **Percentage Savings** | **15.73%** |



# Mary…
# after 9 months in PACT

- More than 90% adherent to her medications and appointments
- CD4 count  reached 289
- HIV viral load undetectable for 6 months
- Weight up to 140 lb
- Able to disclose with support

- BUT then relapsed…and now out of touch

# PACT INCLUDED….

**Many HIV prevention and treatment strategies focus on the individual level and assume that -with help-a person will defy or overcome social, economic and political constraints to achieve health.**

# Why the disparities in outcome?

- Not biological as far as we know
- Poverty/marginalization forces priorities other than health and logistically/psychosocially complicates interaction with the system
- Poor access to care (e.g. insurance)
- Poor utilization of care
- Stigma, fatalism, depression, substance use, violence, PTSD, stress, distrust of the system
- Education; health literacy; language barriers
- System problems (health care/social service systems are not designed for the vulnerable)
- Differential treatment once in care: racism, sexism, classism

# A more structural lens

- Poverty/income inequality
- Inequality in social capital and political power
- Gender-based and community-based and structural violence
- Poor education and lack of employment opportunities
- Stigma, racism, sexism
- Lack of federal harm reduction policies
- Punitive drug laws and mass incarceration
- Punitive immigration laws
- Unequal health care access
- Unequal health care quality

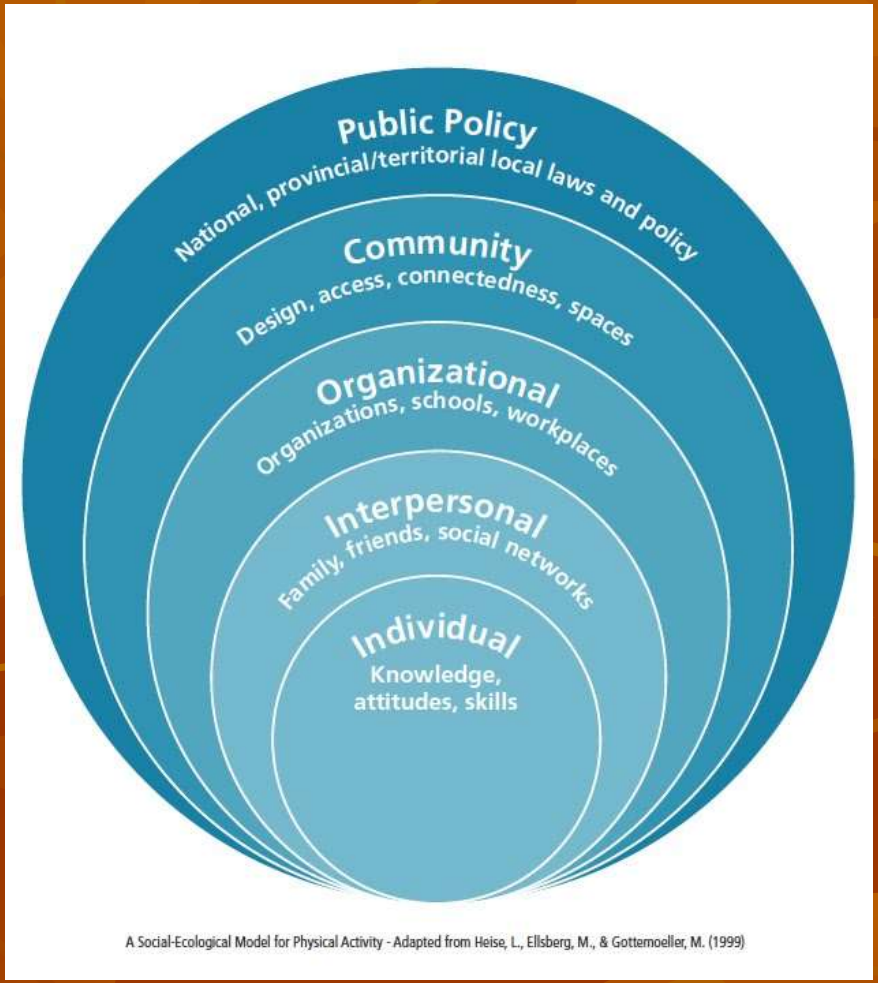
# What are we doing?

- CDC estimates that only 10% of premature mortality is due to inadequate health care

Nonetheless

- We spend 98% of our health related dollars on health care

# “International consensus that health is neither created nor maintained solely within the health sector”

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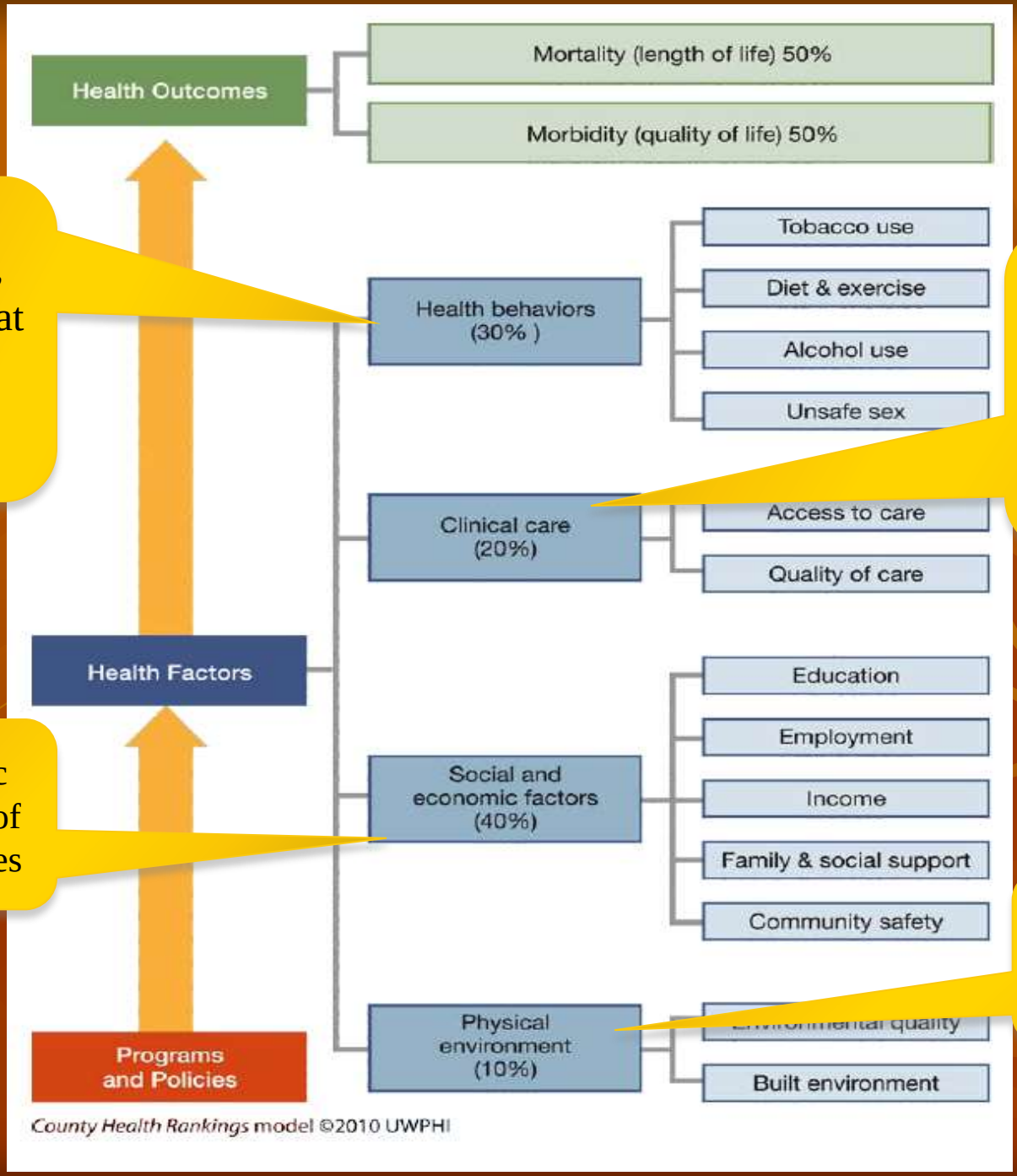



Access to healthy food, exercise/recreation, liquor stores, fast food, crime

Providers, quality of care, trust, insurance

Socioeconomic Factors ~ 40% of Health Outcomes

Where you live and work

***"Fostering social structural change is the critical next stage in the global fight against AIDS."***

Tim Rhodes, Merrill Singer, Philippe Bourgois, Sam Friedman and Steffanie Strathdee, (Soc Sci Med, 2005)

# Structural interventions

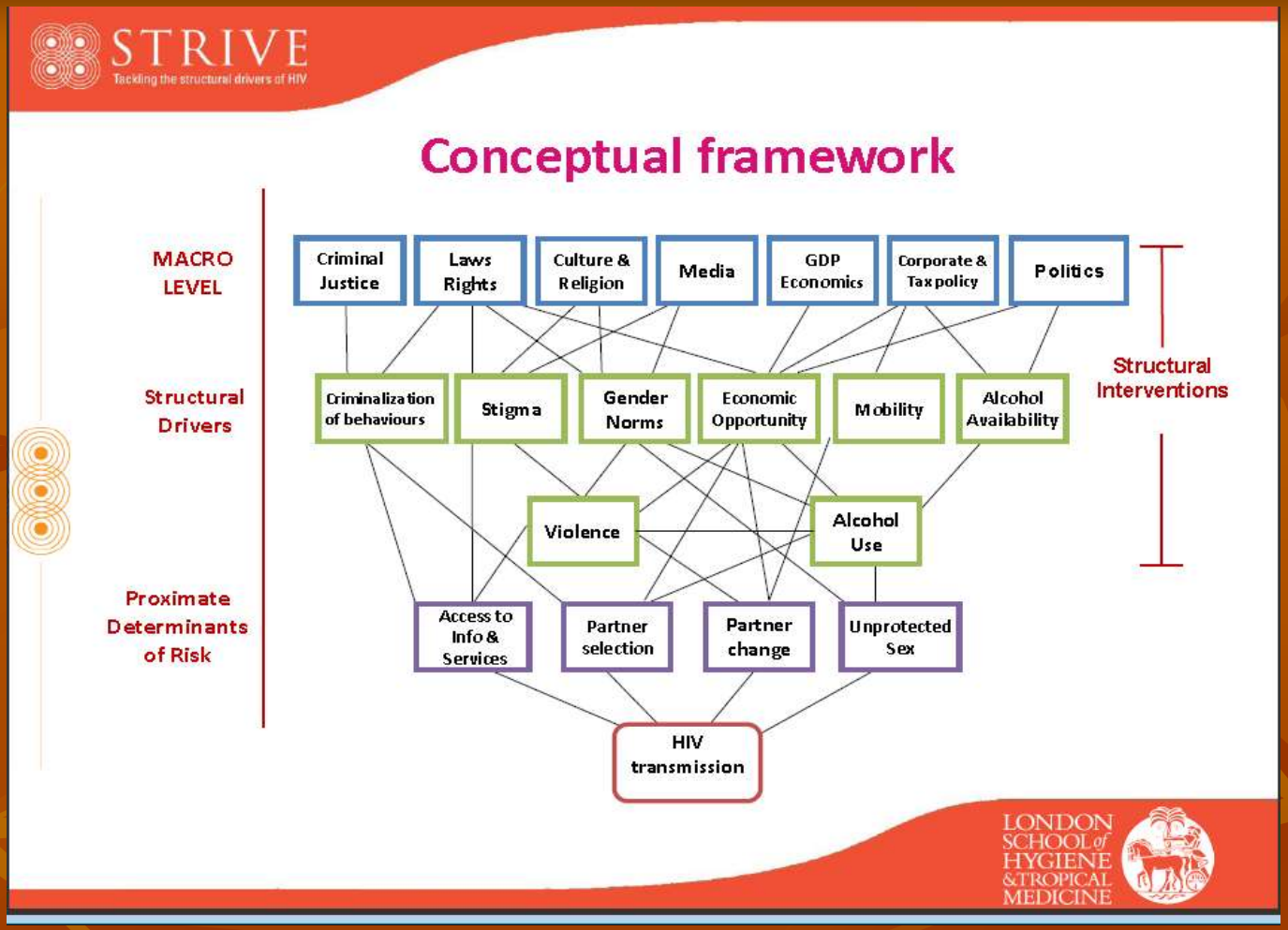
## How do we create environments that enable good health?

- Structural interventions are those “that promote health by altering the structural context within which health is produced and reproduced.”

  (Blankenship et al. 2000 et seq; Des Jarlais, 2000; Sumartojo, 2000)

# Individual vs Structural Interventions

- Seat belts
- Tobacco
- Alcohol
- Firearms




"…Engaging with social drivers requires methods and approaches beyond traditional conceptualizations that seek to identify and intervene on single, causal determinants or universal mechanisms of influence."

Source: (Auerbach, Parkhurst, Cáceres et al., aids2031 Working Paper 24)

# We've seen some good downstream structural interventions in HIV…

- Needle exchange laws
- HDAP and HIV drug access laws
- HIV awareness campaigns
- Universal HIV testing
- www.effective**interventions**.org/Files/**structuralinterventions**

- But what about more upstream? The root cause interventions?

# CDC in 2008

- A call to action to focus on some of these more upstream factors **http://www.cdc.gov/hiv/default.htm**

BUT

- Measuring the effectiveness of structural intervention programs can be difficult for several reasons:
- there is no direct, one-to-one relationship between structural interventions and HIV incidence
- structural interventions are often not amenable to randomization
- causal pathways from intervention to end point outcomes are usually indirect and complex
- there has been limited funding to study these questions at a scale proportionate with funding for research on biomedical and behavioral interventions

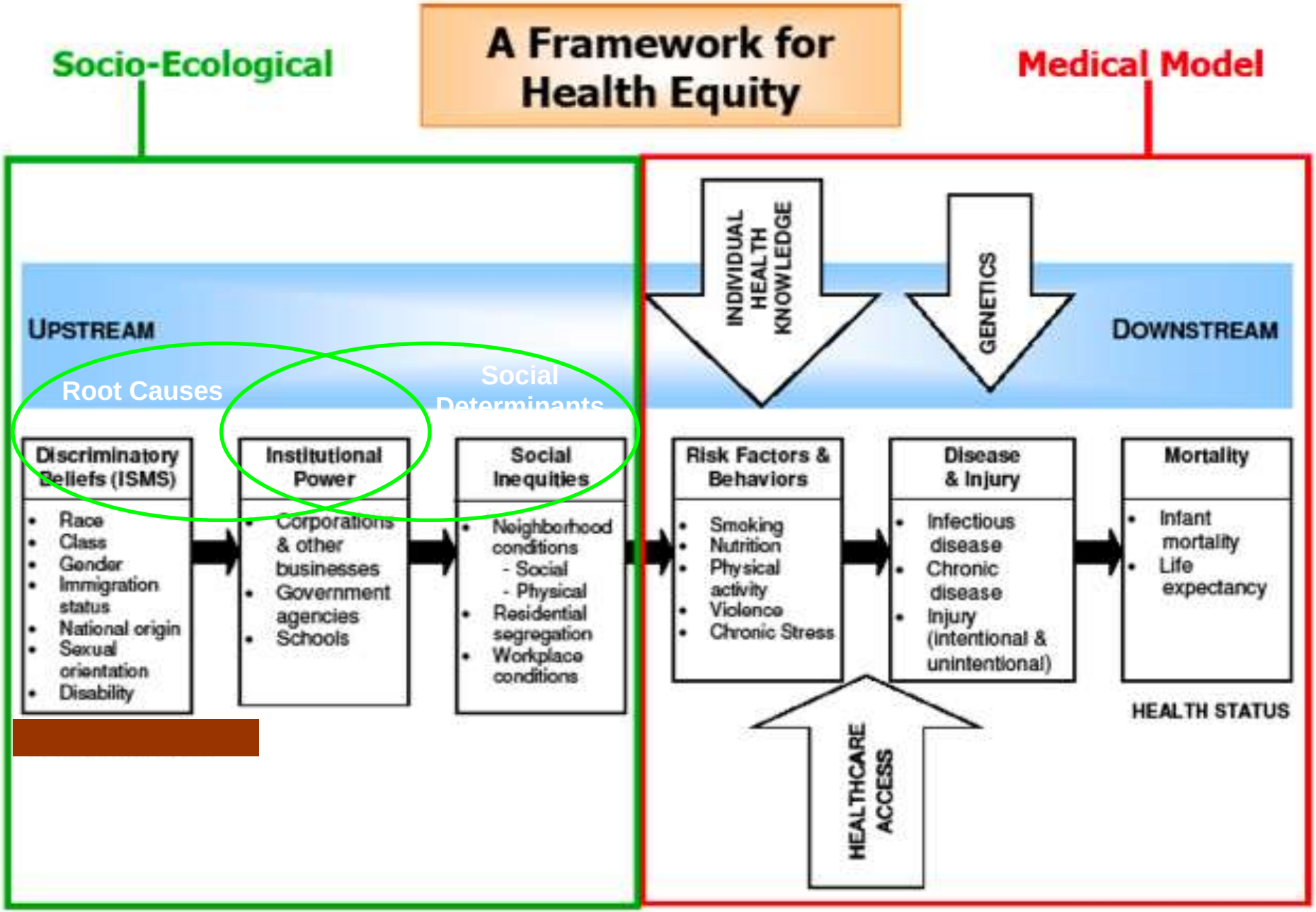
# Looking abroad

- IMAGE intervention in South Africa
- RCT among 7 villages
- Microfinance was linked with HIV prevention intervention. Women were given microloans as well as training/skills in HIV prevention and instruction on women's rights, violence prevention
- At end of study, 50% reduction in intimate partner violence
- No change in HIV rates but authors posited that that would come in time; further study underway

Lancet. 2006 Dec 2;368(9551):1973-83.

# Are any evidence-based practices that take into account upstream determinants of health listed on CDC website?

# A Framework for Health Equity

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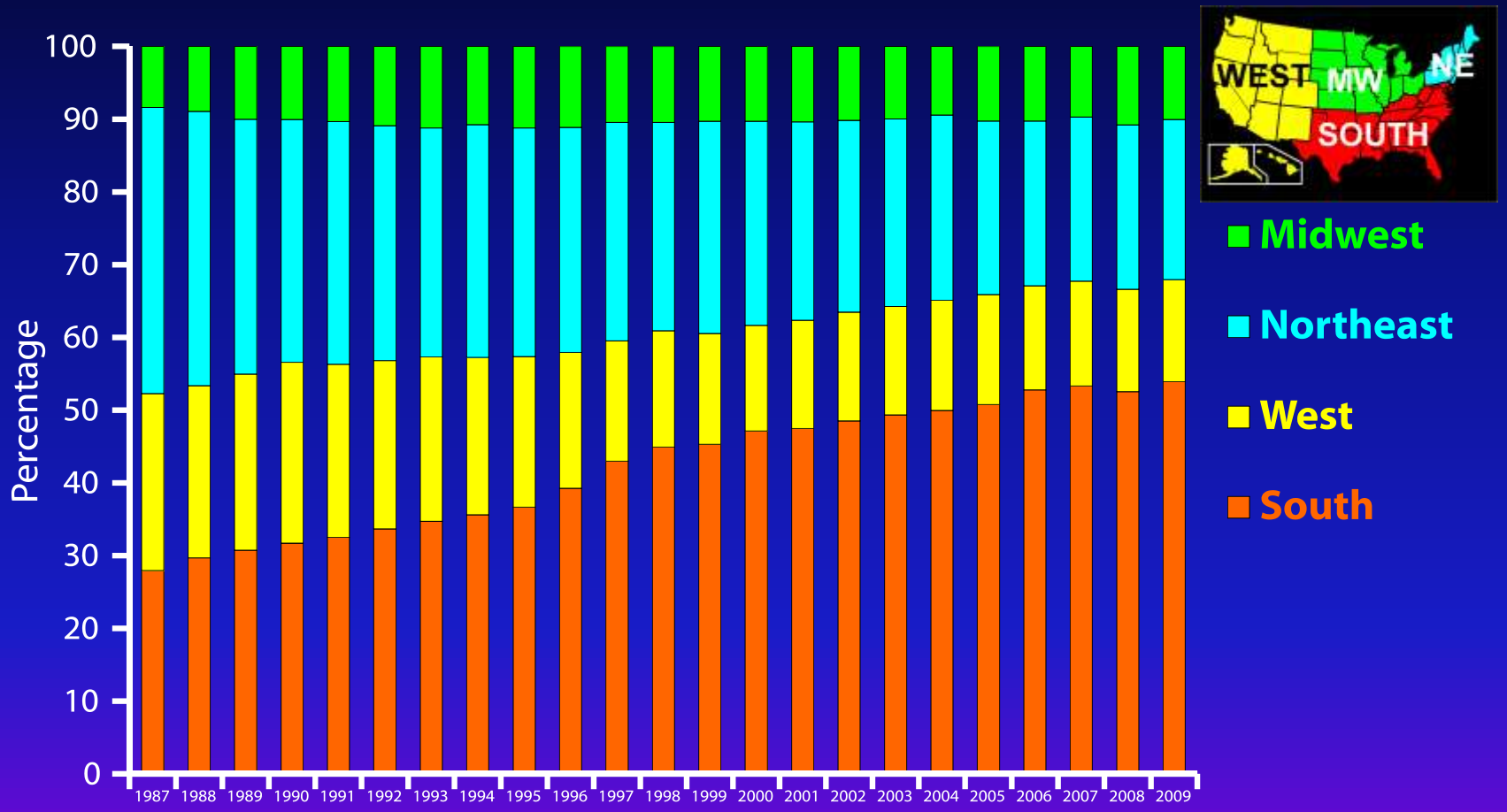
- Adapted by ACPHD from the Bay Area Regional Health Inequities Initiative, Summer 2008

# Trends in the Percentage Distribution of Deaths due to HIV Infection by Geographic Region, United States, 1987–2009




Note: For comparison with data for 1999 and later years, data for 1987–1998 were modified to account for *ICD-10* rules instead of *ICD-9* rules.

# What intervention will you design?

# Summary

- Structural factors – especially socio-cultural, economic and political factors- largely account for and perpetuate HIV disparities
- Social and political barriers require social and political solutions.
- How do we move forward?

# A measure of a society…

- The quality of its populations' health
- The fairness in the distribution of health
- The degree of protection provided from disadvantage due to ill-health